COVER SHEET

ICT Education in Vietnam: Diving into the Second Wave

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Abstract: This paper will describe the conduct of a Masters course in Information and Communications Technology (ICT) in a Vietnamese university. The authors of this paper comprised the teaching and unit planning team. Engaging higher degree students in Masters level programs in the use of ICT in teaching and learning would appear to be diving directly into the "second wave," bypassing the potentially constraining experiences of the "first wave." The findings of this paper will be drawn from anecdotal observations and from student responses to an electronic discussion forum. This paper will conclude that diving into the "second wave" of technology is fraught with many challenges and requires major school and curriculum reform.

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Introduction

It is commonly held that the "first wave" of ICT in schools saw the computer being considered as an illustrative or broadcast tool similar to an overhead projector or tape recorder (Sendov, 1986). It could be contended that adoption of this wave established practices which were difficult to change and were not conducive to the adoption of constructivist teaching approaches (Dexter, Anderson & Becker, 1999). Changes in the technology itself and in approaches to teaching and learning have seen the use of ICT in schools become more interactive and student-centred. The "second wave" is characterised by the ubiquity of ICT in society and its pervasive influence on schooling. The focus is "not how to introduce the computer into education but how to build education in the presence of the computer" (Everson, n.d, paragraph 4). As there are few computers in Vietnamese schools and little expertise amongst its teachers, the conduct of a Masters course in the use of ICT in teaching and learning would indicate an intention to bypass the first wave and to dive directly into the second wave with its implications for school and curriculum reform.

Background to Course

Negotiations began in May 2002 between academics from the School of Maths, Science and Technology Education, Queensland University of Technology (QUT) (Australia) and the Hue University College of Education (HUCE) (Vietnam) to plan, write and deliver four units in a Master of Education course (to be offered by HUCE). Within the conditions of the QUT-HUCE agreement, the units were to be delivered at various times through 2003 and the teaching was to be in English. The purpose of these arrangements was twofold. The first being (a) to allow students access to contemporary educational theory and practice; and (b) to engage students in academic and conversational English. One of these units, entitled "Using Information and Communications Technology in Teaching and Learning" is the subject of this paper. The unit under review was conducted in February 2003 over a duration of 6 intensive days. There were thirty-four students (N=34 (f=13, m=21)) in the class from various locations across Vietnam who had attended a

three-month intensive English language program prior to the course. All were practising teachers or system bureaucrats who had been awarded a scholarship to extend their studies to Masters level. Students were given a book of course notes, readings and a support CD-ROM.

Findings

The findings presented in this paper were based on student responses to four discrete topics placed on a discussion forum and on teacher observations during the period of the course. The discussion topics (posed as cloze statements or simple declarative questions) were:

(i) A computer is …
(ii) A computer is like …
(iii) What do you like most about this course?
(iv) What has been the most difficult about this course?

The first forum topic required students to complete the phrase, "A computer is." The expectation was that students would offer a definition or denotation of the word, "computer" and perhaps include understandings of a computer system (with its peripheral devices). Twenty-nine students (N=34) entered a textbook answer that had been provided in the students' glossary (on the support CD-ROM). Those (n=5) who offered alternate responses to Topic 1 (that is, what is a computer) offered metaphors based on either a television (n=1) or a person (n=4). The likening of a computer to a person is not uncommon and has been noted in studies by Turkle (1984), Dowling (1993) and Lloyd (1995). In a follow-up conversation, it was revealed that the student who likened a computer to a television was trying to create a knowledge bridge between the known and unknown.

In the second forum, students were asked to complete the phrase, "A computer is like." The expectation was that students would provide a figurative definition (metaphor, analogy or simile) thus revealing their fledgling understandings of ICT and what they imagined its uses to be in the classroom. The understanding for this comes from Collins and Gentner's (1987) hypothesis that analogies enable people to construct a structure-mapping that allows them to create new mental models and to generate predictions about what should and could happen in the real world. Given the understanding that few students had had previous computer experience and that none had experience of teaching with computers, the conceptual understandings which might be revealed through figures of speech became important to ascertain. This conceptual understanding, or description of an imagined world is the "second wave" that these students were about to enter.

Thirty students (N=34) submitted a verbatim copy of an example prepared by one of the teachers of Hue University. Where students varied from this (n=4), they personified the computer likening it to a friend or girlfriend or a human brain. These responses again paralleled those in the research literature with the reference to the "brain" being a probable link to either science fiction or the information processing capabilities of a computer.

While the reasons for the low level of original or personalised responses must remain conjectural, it is likely that this outcome was because of (a) the language barrier, where students lacked the proficiency in English to devise a personal definition; or (b) inexperience, where students lacked the personal understanding which only comes from extended use and adoption of ICT into personal work practices; or (c) a pre-existing concept of teaching and learning as the provision of a correct or textbook response. The latter being germane to the Vietnamese education system with its structure of externally set theoretical examinations.

The third forum topic sought to elicit from students what they "liked" about the course they were undertaking. The fourth and final forum topic (presented on the final day of the teaching block) asked students what they found most difficult in the course. These questions were asked as an evaluation of the course and to inform the planning of future iterations.

The responses to these two forums indicated that students were unanimously enthusiastic about using ICT in the course. This was tempered by an acknowledgement that (a) more time was needed to practise and

perfect newly-acquired skills; and, (b) low proficiency in English and limited access to computers outside of the course was an obstacle to deeper understanding or further progress.

One student suggested that the software applications being taught were "interesting but difficult." From observation and direct conversation with the student, this revealed itself to mean that the student had no real world application and had not experienced any real world modelling of the software. This absence of experience meant that the student could not engage fully with the software and its functions beyond a superficial context. Many shared this lack of conceptualisation of the general application and purpose of ICT and this could arguably have reduced the experience of the course to being a directionless activity. This could be equated to the reduced experience of travellers who know little of their destination, and therefore make the food and customs of the visited land into a museum curiosity rather than a meaningful or life-changing experience.

During practical workshop sessions, students were introduced to technological teaching aids including digital cameras (still and movie). They also participated in electronic discourse that included a chat room (synchronous communications) and discussion forums (asynchronous communications). Students were proficient and enthusiastic in the use of these aids and environments. It is of interest how quickly students made these experiences part of their own practice. As a consequence, some students visited local Internet cafes and, on their own initiative, participated in public chat rooms. They similarly took digital photos to keep as souvenirs of the course. One student brought a family photo (print) to class and asked to photograph it so as to have a digital image to include on his web page. As a teaching tool, the digital camera proved invaluable in its motivation and the opportunity it gave for teaching about file management and file types. When engaged in the electronic discourse in the classroom, students moved between Vietnamese and English. The tenor of the conversations in the "chat" environment was informal, conversational and somewhat irreverent (as noticed in the gentle bantering between students). There was a noticeable difference in the class following this session, with teachers and students forming a closer association and a shared sense of community. These experiences were welcomed by the students and perceived by them to be part of a learning adventure. Phrases such as "toys," "fun," and "useful and interesting" were used liberally in the students' responses to what they liked about the course.

It is important to note that the students in the course were expected to be positive about the learning experiences offered by the course. They were scholarship holders and this was, in and of itself exciting for them. They were similarly away from home with all the adventures that life in another city holds. In Vietnam, there is great prestige in being at university and the experience of these students was heightened by the fact they were to be taught by visiting academics (from Australia) and that they were the first students to use the new computing facilities at Hue University. There was considerable personal pride in being part of this new high-profile course and to have the opportunity to practise their spoken and written English.

A common theme in the student responses was that of practicality and usefulness. Many noted that computers were necessary "for their job" and that they would use ICT in the future. A caveat to this was that they could realise this ambition only with appropriate access and funds. The "second wave" would have to wait for the physical infrastructure and curriculum change to make it possible.

Students were complimentary about the course and the teachers. They admired the teachers' expertise, commitment and their relaxed approach ("friendly and funny"). Students were often eager to please the teachers and one noted that "we do not make [the] teachers feel very happy" while another promised "to study harder." This mentality may also be contributory to the rote answers provided in the forums pertaining to the physical and metaphorical descriptions of a computer.

The prime difficulty experienced by students in the course was with regards to English. Students often found difficulty in listening to and understanding the teachers, as well as making themselves understood. In trying to negotiate this barrier we adopted the following practices:

(a) writing down verbal tasks
(b) judicious use of translator
(c) spoke informally with students to familiarise them with our accents

(d) continuous development of a technical glossary.

The students were required to complete three pieces of assessment. These were (i) a digital portfolio, (ii) a group presentation and (iii) a report. At the time of writing only the first two assessment items were available. These assessment items revealed a general competence in the use of ICT and an emerging understanding of its application in the classroom.

Conclusion

The students were unanimously enthusiastic about the use of ICT in the curriculum. They believed it to be consonant with national goals of progress and the emergent Westernisation seen to be of benefit to them as a developing Asian country. But achievement of these goals has more to do with pedagogy and curriculum than the mere acquisition of ICT skills for teachers and the resourcing of schools with computer networks (Dexter, Anderson & Becker, 1999). Schools in Vietnam follow a national curriculum, and teaching and learning adopts a transmission model with the end outcome being success in external examinations. To achieve the aforementioned goals, education in Vietnam would need to undergo major reform and change. This is a future direction with much to be achieved in terms of funding and infrastructure. One student asked how he could provide ICT experiences for his students in a poor rural village school. Interestingly he did not express doubt that it would be of value to his students but rather asked "how"! The "why" was presumed as part of the students' fundamental belief that ICT was important.

The abiding sentiment of the students in completing the unit was one of "hope." They were all keen to learn more for themselves and to make use of ICT in their classrooms. They all were powerless to affect the changes that they so readily sought. The "second wave" was in their sight, but they were pragmatic about having to wait for the tide to turn.

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